



October 30, 2017

**CERTIFIED MAIL: 7013 0600 0000 5877 6824**  
**RETURN RECEIPT REQUESTED**

Chief, Air and TRI Section  
Enforcement Division  
U.S. Environmental Protection Agency Region 9  
75 Hawthorne Street  
San Francisco, California 94105

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Director, Air Enforcement Division  
Office of Civil Enforcement  
U.S. EPA Headquarters, MC 2242A  
1200 Pennsylvania Avenue, NW  
Washington, D.C. 20460

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Chief, Environmental Enforcement Section  
Environment and Natural Resources Division  
U.S. Department of Justice  
Box 7611 Ben Franklin Station  
Washington, D.C. 20044-7611  
Re: DOJ No. 90-5-2-1-10459

**Re: United States v. Asarco**  
**Consent Decree No. CV-15-02206-PHX-DLR**  
**Quarterly Report for the Third Quarter of 2017**

Presented below is Asarco's quarterly report for the third quarter of 2017, as required by paragraphs 55 and B.36 of the above-referenced consent decree. Consent Decree reporting requirements are in bold italics followed by the required report information.

***Paragraph 55.a.i: Emissions and monitoring data and corrective action records, including the following:***

***(1) The results of any performance tests that were required by the Consent Decree;***

**Smelter Method 5 Performance Tests:**

Method 5 performance testing was performed at the secondary hood baghouse, anode baghouse, and RR Cottrell ESP during the month of September 2017, however, the test reports have not been finalized as of September 30, 2017.

Smelter Method 5B Performance Tests:

Method 5B performance testing was performed at the acid plant during the month of September 2017, however, the final report has not been finalized as of September 30, 2017.

Concentrator Method 5 Performance Tests:

No performance testing was conducted in the third quarter of 2017.

Flash Furnace, Converter, and Anode Buildings Opacity Performance Tests:

N/A. The due date for the submittal of a performance test plan per 40 C.F.R. § 63.1450(c) is 60 days after the completion of the converter retrofit project (CRP).

- (2) Copies of any Visible Emissions evaluations or records for which opacity was 4 percent or greater for the building housing the flash furnace, converters, and anode furnaces (to include date, time, and duration of the opacity);**
- (3) A description of any corrective actions taken to address the opacity from the building housing the flash furnace, converters, and anode furnaces (to include the date and time such actions were commenced and completed), along with a description of the cause of the opacity;**

Exceedance(s) of 4% opacity limit applicable to visible emissions from the flash furnace, anode furnaces, and converter and not yet superseded by requirements related to the installation of the long-path optical density monitors:

N/A. Dependent upon CRP completion.

Investigation(s), cause(s) and corrective action(s) taken:

N/A. Dependent upon CRP completion.

- (4) Dates, times, and duration of each bag leak detection system alarm sounding, the cause of the alarm and the date and time that ASARCO commenced investigation of the baghouse, and a description of the corrective actions taken, if any, along with the date and time such corrective actions were completed;**
- (5) The total alarm time for each bag leak detection system, as determined in accordance with subparagraph 26.a.v;**

Total alarm time for each bag leak detection system:

The secondary hood baghouse had the following alarms during the third quarter of 2017.

Date	Time of Alarm	Total Duration of Alarm (hours)	Module Number
7/24/2017	11:49 - 14:04	3.75	2

The anode baghouse had the following alarms during the third quarter of 2017.

Date	Time of Alarm	Total Duration of Alarm (hours)	Module Number
9/24/2017	7:33 – 7:34	0.02	2

Exceedance(s) of alarm limit of no more than 5% of total operating time in any 6-month period:

<i>Secondary Hood Baghouse: April 1, 2017 – September 30, 2017</i>	
Total duration of bag leak detection system alarm hours	9.75
Total hours of source operation	3672
Percent of time in alarm (operating hours)	0.27%

<i>Anode Baghouse: April 1, 2017 – September 30, 2017</i>	
Total duration of bag leak detection system alarm hours	0.12
Total hours of source operation	3672
Percent of time in alarm (operating hours)	0.003%

Note: The Hayden Smelter was down from June 18, 2017 through July 17, 2017 for a maintenance outage and for the installation and construction of equipment relating to the CRP. No processing equipment was operating during this time period.

Investigation(s), cause(s) and corrective action(s) taken:

The alarm on July 24, 2017 for the secondary hood baghouse resulted from five air jets being stuck in the open position which caused a low air pressure through the baghouse. The air jets were repaired by replacing the diaphragms which was done that same day.

The alarm on September 24, 2017 at the anode baghouse was caused by a blown diaphragm. The diaphragm was repaired that same day.

**(6) Dates, times, and duration of any instances where pressure drop or scrubber liquid flow rates were outside the established ranges for those parameters, the date and time that ASARCO initiated investigation, the readings at the time of the issue, a description of the underlying cause for those readings, and a description and explanation of any corrective actions, including the date and time that such actions were commenced and completed;**

Hourly (block) average pressure drop(s) and liquid flow rate(s) outside range established in most recent Method 5 test:

The hourly block averages outside the established range(s) are detailed in the enclosed compact disk.

Investigation(s), cause(s) and corrective action(s) taken:



The investigation(s), cause(s) and corrective action(s) taken for each event are detailed in the enclosed compact disk.

Times scrubber(s) not in service or believed to be malfunctioning:

The times that the scrubber(s) were not in service or believed to be malfunctioning are detailed in the enclosed compact disk.

***(7) Dates, times, and descriptions of deviations from the gas capture parametric monitoring requirements and/or limits of Paragraph 9;***

*PRIMARY HOODING PARAMETER:*

Failure(s) to achieve minimum air infiltration ratio of 1:1 during blowing when improved hood is operational averaged over 24 blowing hours rolled hourly:

N/A. Dependent upon CRP completion.

Investigation(s), cause(s) and corrective action(s) taken:

N/A. Dependent upon CRP completion.

*SECONDARY HOODING PARAMETER DURING BLOWING:*

Failure(s) to achieve minimum exhaust rate of 35,000 SCFM at a converter averaged over 24 blowing hours rolled hourly, unless an alternative parameter has been approved:

N/A. Dependent upon CRP completion.

Investigation(s), cause(s) and corrective action(s) taken:

N/A. Dependent upon CRP completion.

*SECONDARY HOODING PARAMETER DURING NON-BLOWING:*

Failure(s) to achieve minimum exhaust rate of 133,000 SCFM at a converter averaged over 24 non-blowing hours rolled hourly, unless an alternative parameter has been approved:

N/A. Dependent upon CRP completion.

Investigation(s), cause(s) and corrective action(s) taken:

N/A. Dependent upon CRP completion.

*SECONDARY HOODING PARAMETER WHEN HOOD DOORS ARE CLOSED:*

Failure(s) to achieve minimum negative pressure drop across a hood of 0.03 mm of Hg (0.007 inches of water), unless an alternative parameter has been approved:

N/A. Dependent upon CRP completion.

Investigation(s), cause(s) and corrective action(s) taken:

N/A. Dependent upon CRP completion.

*TERTIARY HOODING PARAMETER AT ALL TIMES MATERIAL IS PROCESSED IN COPPER CONVERTER DEPARTMENT:*

Failure(s) to achieve minimum exhaust rate of 400,000 ACFM averaged over 24 hours of copper converter department material processing rolled hourly, unless an alternative parameter has been approved:

N/A. Dependent upon CRP completion.

Investigation(s), cause(s) and corrective action(s) taken:

N/A. Dependent upon CRP completion.

***(8) Dates, times, and descriptions of deviations when ASARCO operated the furnaces, capture systems, baghouses, R&R Cottrell, or any other equipment in a manner inconsistent with the approved Operations and Maintenance Plan;***

N/A. The Hayden Operations Operation and Maintenance Plan was submitted to EPA on December 21, 2016. On February 22, 2017 Asarco received a letter from EPA disapproving the submitted Operation and Maintenance Plan. On April 10, 2017 Asarco submitted a revised Operation and Maintenance Plan to address EPA's comments. The revised submitted Operation and Maintenance Plan is awaiting EPA approval.

***(9) Dates, times, and descriptions of deviations when ASARCO's material handling was carried out in a manner inconsistent with the approved Operations and Maintenance Plan and/or Fugitive Dust Plan;***

*OPERATION AND MAINTENANCE PLAN*

The Hayden Operations Operation and Maintenance Plan was submitted to EPA on December 21, 2016. On February 22, 2017 Asarco received a letter from EPA disapproving the submitted Operation and Maintenance Plan. On April 10, 2017 Asarco submitted a revised Operation and Maintenance Plan to address EPA's comments. The revised submitted Operation and Maintenance Plan is awaiting EPA approval.

*FUGITIVE DUST CONTROL PLAN*

On December 7, 2016 Asarco received comments from EPA regarding the original submitted Fugitive Dust Plan and on February 6, 2017 Asarco submitted a revised Fugitive Dust Plan addressing those comments. On June 26, 2017 Asarco received EPA's partial approval and partial disapproval of the revised Fugitive Dust Plan. Asarco submitted a revised Fugitive Dust Plan addressing EPA's June 26, 2017 comments on September 8, 2017.

Deviation(s) from material handling requirements of approved fugitive dust control plan and corrective action(s) taken:

Fugitive Dust Plan has been submitted and is awaiting EPA approval.



Exceedance(s) of 15% Method 9 opacity limit on visible emissions from any source listed in the approved fugitive dust control plan (i.e., sources other than the furnaces and converter building) and corrective action(s) taken:

Fugitive Dust Plan has been submitted and is awaiting EPA approval.

Opacity readings outside major openings of secondary and tertiary crushers Total Enclosure or fine ore storage building in excess of minimum measurable opacity level over 6-minute period using long-path optical density monitors and corrective action(s) taken:

Fugitive Dust Plan has been submitted and is awaiting EPA approval.

Event(s) when DCS system recorded data outside of established operational parameters, investigation(s), cause(s), corrective action(s), and degree of success:

Fugitive Dust Plan has been submitted and is awaiting EPA approval.  
Dates and times when DCS system was not recording data:

Fugitive Dust Plan has been submitted and is awaiting EPA approval.

#### *AMBIENT MONITORING NETWORK*

Ambient monitoring network raw data and calculated ambient levels for the third quarter of 2017 are enclosed with this report on a compact disc. Note the Fugitive Dust Plan has been submitted and is awaiting EPA approval.

#### *HIGH WIND EVENTS*

High Wind Event data for the third quarter of 2017 is enclosed with this report on a compact disc. Note the Fugitive Dust Plan has been submitted and is awaiting EPA approval.

***(10) Dates, times, and descriptions (including emissions data) of any periods where ASARCO failed to meet an emission limit or an emissions control efficiency established under this Consent Decree;***

#### *ACID PLANT PM EMISSION LIMIT*

Exceedance(s) of 6.2 mg/dscm limit as demonstrated through performance testing:  
None

#### *SECONDARY HOOD BAGHOUSE EMISSION LIMIT*

Exceedance(s) of 23 mg/dscm limit as demonstrated through performance testing: None

#### *ANODE FURNACE BAGHOUSE PM EMISSIONS LIMIT*

Exceedance(s) of 23 mg/dscm limit as demonstrated through performance testing: None

#### *R&R COTTRELL ESP PM EMISSIONS LIMIT*

Exceedance(s) of 23 mg/dscm limit as demonstrated through performance testing: None

*COPPER CONCENTRATE DRYER PM EMISSIONS LIMIT*

The copper concentrate dryer emissions are routed to the existing R&R Cottrell ESP. See above section regarding the R&R Cottrell ESP PM Limit compliance.

*FLASH FURNACE TAPPING/SKIMMING EMISSIONS CAPTURE SYSTEM PM EMISSIONS LIMIT*

The flash furnace tapping/skimming emissions capture system is routed to the existing R&R Cottrell ESP. See above section regarding the R&R Cottrell ESP PM Limit compliance.

*PROCESS-WIDE TOTAL PM EMISSIONS LIMIT*

The due date for beginning the use of a measuring system described in paragraph 24.a of the decree is June 1, 2019.

Exceedances of 0.6 lb PM per ton of concentrate smelted total PM limit(s):

N/A. Dependent upon CRP completion.

Investigation(s), causes(s) and corrective action(s) taken:

N/A. Dependent upon CRP completion.

*DUCON-TYPE WET SCRUBBER OPERATIONAL REQUIREMENTS*

Exceedance(s) of 0.05 g/dscm limit: None

*DRY LIME SCRUBBING OF SO<sub>2</sub> ROUTED TO SECONDARY HOOD AND R&R COTTRELL REPLACEMENT BAGHOUSES*

Failure(s) to meet applicable control efficiency:

N/A. Dependent upon CRP completion.

Investigation(s), cause(s) and corrective action(s) taken or status of demonstration of technical infeasibility of control efficiency:

N/A. Dependent upon CRP completion.

*CORRECTIVE ACTION TRIGGERS FOR ACID PLANT*

Date	Time of Trigger Level Alarm	Cause and Corrective Actions Taken if Necessary
		No trigger levels were reached during the third quarter of 2017.

*SO<sub>2</sub> EMISSIONS LIMIT FOR GASES COLLECTED FROM THE CONVERTERS*

Exceedance(s) of applicable 650 ppmv limit for gases routed to acid plant or secondary hood baghouse or gases in the tertiary hood exhaust:

N/A. Dependent upon CRP completion.

Investigation(s), cause(s) and corrective action(s) taken:

N/A. Dependent upon CRP completion.

**(11) *Dates, times and descriptions where ASARCO exceeded the Blowing rate limit set forth in Paragraph 8 and/or, for such time as the Blowing hour limit in Paragraph 8.b remains applicable, the Blowing hour limit;***

Exceedance(s) of converter blowing limit of 32,000 SCFM averaged over 5 minutes of blowing and rolled each minute:

N/A. Dependent upon CRP completion.

*TOTAL COMBINED BLOWING TIME OR SO<sub>2</sub> LIMIT ON ACID PLANT TAIL GAS*

Exceedance(s) of total combined blowing time limit at all converters of 21 hours per 24-hour period rolled hourly, unless Asarco accepts 100 ppmv SO<sub>2</sub> limit on acid plant tail gas:

N/A. Dependent upon CRP completion.

Investigation(s), cause(s) and corrective action(s) taken:

N/A. Dependent upon CRP completion.

**ii. *Status and/or completion of construction or compliance milestones;***

*CONVERTER RETROFIT PROJECT*

Key equipment for the Converter Retrofit Project is in the process of being procured and/or delivered to the facility. The converter process gas electrostatic precipitator mechanical assembly was completed in May 2017, the electrical installation will be completed in October 2017, and an air load test is scheduled for November 2017. The new converters # 4 and 5 were set on their trunnions in August 2017 and the construction contractor has been installing the structural steel and primary and secondary hoods associated with those converters. The construction contractor is also installing equipment relating to the primary hood cooling system and converter mouth burners. In June 2017, the steel towers for the tertiary ventilation system were completed and installation of the tertiary ducting began in July 2017. The erection of the transfer tower for the converter silica and revert system was completed in September 2017. Additionally, the installation of connecting duct work is on-going. See also the PowerPoint presentation titled "Hayden CRP 3Q2017 Status" for additional information.

*R&R COTTRELL ESP REPLACEMENT BAGHOUSE*

The replacement baghouse's delivery was delayed and construction schedules had to be modified accordingly. The baghouse's ID fan was delivered and installed during this quarter.



The construction for the new MCC building and bucket elevator system foundations for the baghouse began. Supporting structural steel and foundation work continued during this quarter.

*DRY LIME SCRUBBING OF SO<sub>2</sub> ROUTED TO BAGHOUSES*

Equipment for the dry lime scrubbing systems was delivered in August 2017. The lime silo for the secondary hood baghouse and the new furnace vent baghouse was installed and equipment foundations for this system have been completed.

*PREPARATION OF FUGITIVE EMISSIONS STUDY PROTOCOL*

Asarco selected SLR International Corp. to assist in preparing the fugitive emission study protocol. The protocol for the fugitive emission study was submitted to EPA for approval on June 15, 2016. Asarco received comments on the submitted protocol on December 5, 2016 and on January 20, 2017 Asarco submitted a revised fugitive emission study protocol addressing those comments. On May 31, 2017 Asarco received EPA's approval of the revised fugitive emissions study protocol.

*IMPLEMENTATION OF APPROVED FUGITIVE EMISSIONS STUDY PROTOCOL*

The due date for the commencement of the fugitive emissions study protocol for the initial study is 6 months after the completion of the converter retrofit project.

*LONG-PATH OPTICAL DENSITY MONITORS SPECIFIED IN PROTOCOL*

The due date for the installation of the three long-path optical density monitors at the building emission points specified in the fugitive emissions study protocol is 6 months after the completion of the initial fugitive emissions study.

**iii. Status of PM CEMS installation and PS-11 testing pursuant to Paragraph 14;**

On March 8, 2017 EPA approved of the March 3, 2017 revised Installation, Certification and QA/QC Protocol for the PM CEMS. From May 8-12, 2017, the initial PS11 correlation testing was performed on the anode baghouse PM CEMS and the testing report was submitted on July 18, 2017. The SICK light scatter PM CEM was successfully certified and the Altech beta attenuation PM CEM was not successfully certified. On September 6, 2017, a revised PS11 Certification testing protocol for the Altech beta attenuation PM CEM located at the anode baghouse was submitted to EPA for review and approval. To help with the review process a conference call between Asarco, EPA, and Asarco's PM CEM vendors has been scheduled for October 3, 2017 to discuss the revised protocol. Additionally, the PS11 certification re-test for the Altech beta-attenuation monitor was scheduled for the week of October 30, 2017. The PM CEMS located at the secondary hood baghouse and the acid plant tail gas stream were installed during the month of August 2017. The initial PS11 correlation testing for these two PM CEMS is scheduled for October 2 – 13, 2017.

**iv. Problems encountered or anticipated with Consent Decree compliance, together with implemented or proposed solutions;**

None

**v. *Status of any permit applications pertaining to any of the requirements of this Consent Decree;***

The air quality permit for the converter retrofit project required under the decree was issued by ADEQ on January 19, 2016. This permit revision included the R&R Cottrell replacement baghouse (termed vent gas baghouse) and the dry lime scrubbing systems that will be installed prior to the secondary hood baghouse and new vent gas baghouse.

On May 5, 2017 Asarco submitted its replacement Title V Air Quality Control Permit Renewal application incorporating all of Paragraph 101 permitting requirements from the Consent Decree, and on May 12, 2017 Asarco submitted a copy of that permit application to the Paragraph 117 list of addressees as required. On June 23, 2017 Asarco submitted a revision to the May 5, 2017 Title V Air Quality Permit Renewal Application to ADEQ, and on June 26, 2017 Asarco submitted a copy of those revisions to the Paragraph 117 list of addressees as required. Asarco and ADEQ have regularly scheduled conference calls to facilitate the permitting process. On September 26, 2017, Asarco submitted a letter to EPA requesting clarification on the inclusion of the Fugitive Dust Plan into the Renewal Title V Air Permit.

**vi. *The status of the SEP under Section VIII and Appendix C including, at a minimum, a narrative description of activities undertaken; and***

No actions have been taken at this time to procure the new diesel-electric switch locomotive. The due date for purchasing and operating the new diesel-electric switch locomotive is December 30, 2018.

**vii. *The status of the Environmental Mitigation Projects under Section VII and Appendix A including, at a minimum, a narrative description of activities undertaken; status of Environmental Mitigation Project milestones set forth in Appendix A; and a summary of costs incurred since the previous report.***

*PINAL COUNTY ROAD PAVING ENVIRONMENTAL MITIGATION PROJECT*

On March 3, 2017 EPA submitted a letter to Asarco approving the revised Pinal County Road Paving Mitigation Project. Asarco set up an account with Pinal County for the mitigation project and on August 1, 2017 \$2,000,000 was transferred to Pinal County. To date Asarco has submitted a total of \$4,000,000 to Pinal County for this project. See pdf on enclosed compact disk titled "Pinal County 3rd Qtr. Report 9-30-17" from Pinal County for a description of project activities conducted and expenditure summary for the third quarter of 2017. As of September 30, 2017, the County has spent \$574,699.39 on the project.

*LEAD-BASED PAINT ABATEMENT ENVIRONMENTAL MITIGATION PROJECT*

On July 7, 2017 Asarco submitted a revised project plan to EPA for review and on July 24, 2017 Asarco received comments from EPA regarding the July 7, 2017 revised plan. On July 13, 2017 Asarco submitted a Notice of Force Majeure Event regarding the lead paint mitigation project not having an implementing entity at that time. Asarco has contacted Central Arizona Governments (CAG) to see if they would be willing implement the lead paint abatement project in place of Gila County. CAG is willing to carry out this project and is in the process of revising the project plan. Asarco and CAG have begun discussions on how the special escrow account should be set up between the two parties for this project. Since the funding is not payable to the




escrow account until after the plan is approved, CAG has spent \$0.00 on the project as of September 30, 2017.

**55.b Description of any non-compliance with the requirements of this Consent Decree, including those identified in Paragraph 55.a.i and an explanation of the violation's likely cause and the remedial steps taken, to be taken, to prevent or minimize such violation.**

There were no issues of non-compliance during the third quarter of 2017.

**PARAGRAPH 58. REPORT CERTIFICATION**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Joseph A. Wilhelm  
General Manager  
Hayden Operations

JAW/rcg

Enclosure